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STRESS PROTEIN COMPOSITIONS AND METHODS FOR PREVENTION AND TREATMENT OF CANCER AND INFECTIOUS DISEASE

ABSTRACT OF THE DISCLOSURE

Pharmaceutical compositions comprising a stress protein complex and related molecules encoding or cells presenting such a complex are provided. The stress protein complex comprises an hsp110 or grp170 polypeptide complexed with an immunogenic polypeptide. The immunogenic polypeptide of the stress protein complex can be associated with a cancer or an infectious disease. The pharmaceutical compositions of the invention can be administered to a subject, thereby providing methods for inhibiting *M. tuberculosis*-infection, for inhibiting tumor growth, for inhibiting the development of a cancer, and for the treatment or prevention of infectious disease. The invention further provides a method for producing T cells directed against a tumor cell or a *M. tuberculosis*-infected cell, wherein a T cell is contacted with an APC that is modified to present an hsp110 or grp170 polypeptide and an immunogenic polypeptide associated with a tumor or with the *M. tuberculosis*-infected cell. Included in the invention are T cells produced by this method and a pharmaceutical composition comprising such T cells. The T cells can be contacted with a *M. tuberculosis*-infected cell in a method for killing a *M. tuberculosis*-infected cell, or with a tumor cell in a method for killing a tumor cell.